In the nation's tightest housing markets, land-use regulation contributes heavily to high housing costs.

Zoning's Steep Price

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A chorus of voices appears to proclaim unanimously that America is in the midst of an affordable housing crisis. In his introduction to a Housing and Urban Development report in March of 2000, then-secretary Andrew Cuomo asserted the existence of such a crisis, and he repeatedly cited it to justify aggressive requests for funding. Numerous advocacy groups share Cuomo's view; in the words of the Housing Assistance Council, "The federal government should commit to a comprehensive strategy for combating the housing affordability crisis in rural America." Home-construction trade associations agree; the National Association of Home Builders asserts, "America is facing a silent housing affordability crisis." Adds the National Association of Realtors, "There is a continuing, growing crisis in housing affordability and homeownership that is gripping our nation." (See "The Fall and Rise of Public Housing," Summer 2002.)

Does the United States really face a housing affordability crisis? Are home prices high throughout the country, or are there just a few places where they have become extreme? In those places that are expensive, why are house prices so high? Is subsidized construction a sensible approach to solving the crisis, or would other reforms be more effective?

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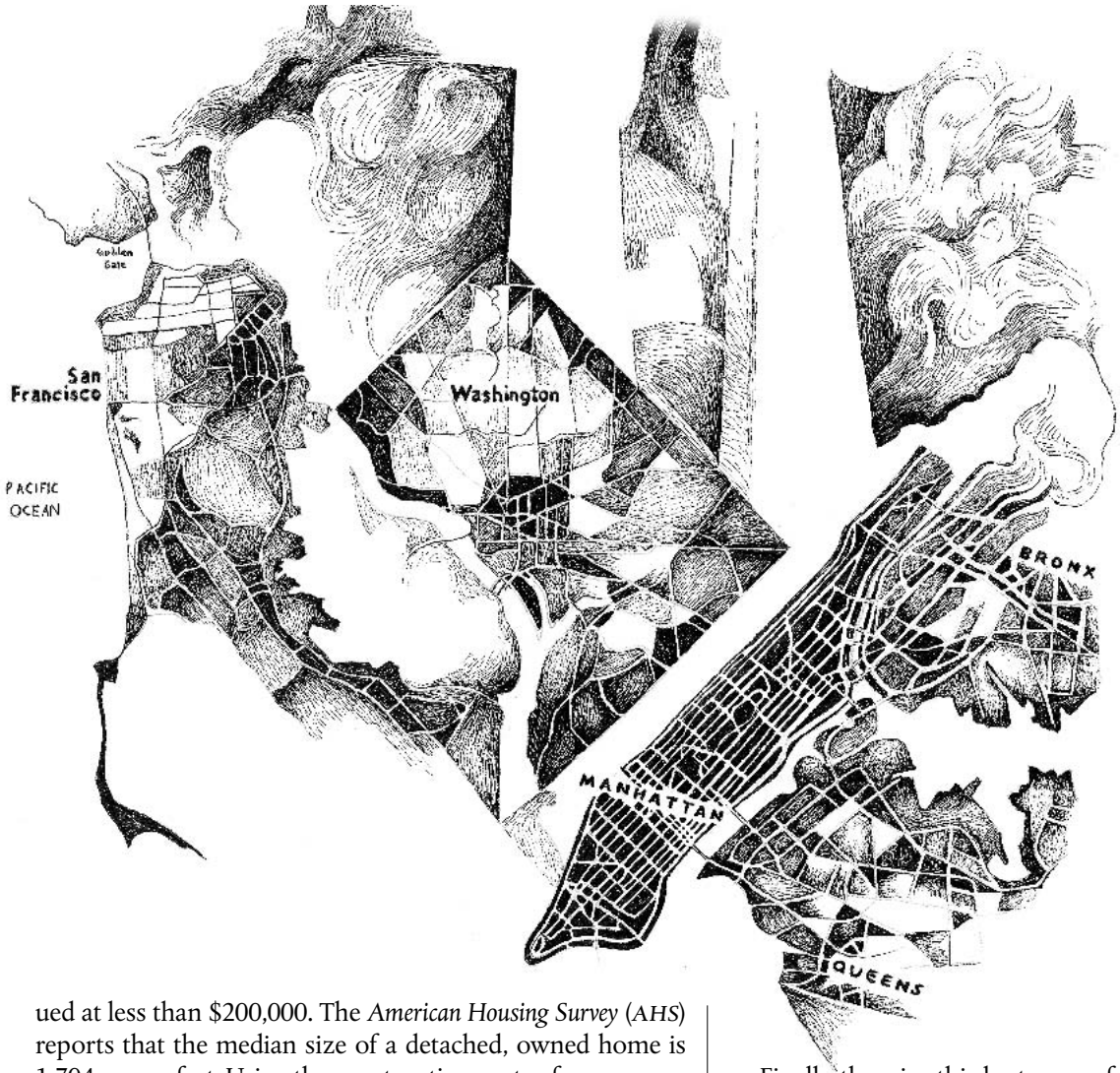
HOUSING PRICES IN THE UNITED STATES

The R.S. Means Company monitors construction costs per square foot of living area in numerous American and Canadian cities. Their data on construction costs include material costs, labor costs, and equipment costs for four different qualities of single-unit residences — economy, average, custom, and luxury. No land costs are included in their data.

Table 1 shows the distribution of housing values relative to construction costs (according to Means) for the nation as a whole and for the four main census regions. The table indicates that at least half of the nation's housing is less than 40 percent more expensive than economy-grade home construction costs, or no more than 20 percent more expensive than average-grade home construction costs. It also indicates that a large share of the nation's housing has its price roughly determined by the physical costs of new construction, as most of the housing value is within 40 percent of the physical construction costs of modest-quality homes. That said, the regional breakdowns reported in Table 1 emphasize that much land in western cities looks to be relatively expensive.

The data for housing prices for several major urban and suburban areas in 1989 and 1999 appear in Tables 2 and 3. As the tables show, there are many areas with extremely cheap housing. Some central cities such as Philadelphia and Detroit have especially large fractions of housing priced at less than 90 percent of the structure cost, as shown in Table 2.

More recent data from the 2000 Census reports that the self-reported median home value is $120,000. Sixty-three percent of single-family detached homes in America are valued at less than $150,000. Seventy-eight percent of those homes are val-



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ued at less than $200,000. The *American Housing Survey* (*AHS*) reports that the median size of a detached, owned home is 1,704 square feet. Using the construction costs of an average-grade home, the data imply that the median-size home should cost about $127,500 to build, while an economy-grade home should cost about $102,000 to construct.

The data provide us with the first important lesson from housing markets. The majority of homes in this country are priced — even in the midst of a supposed housing affordability crisis — at close to construction costs. The value of land generally seems modest — probably 20 percent or less of the value of the house. To us, that means that America as a whole may have a poverty crisis, but its housing prices basically reflect the cost of new construction. Unless state intervention can miraculously produce houses at far less than normal construction costs, such programs are unlikely to reduce radically the distribution of housing costs in America.

Horror stories But if average housing costs in the United States are so low, what about the horror stories? What about the teardowns going for millions in Palo Alto? What about the multi-million-dollar apartments in Manhattan?

Our calculations suggest that America can be divided into three broad areas. First, there are a number of places where housing is priced far below the cost of new construction. Those areas primarily are central cities in the Northeast and the Midwest, such as Detroit and Philadelphia, where there is almost no new growth. In general, those places had significant housing price appreciation over the 1990s, but values are still below construction costs.

In large areas of the country, housing costs are quite close to the cost of new construction. Those places generally have robust growth on the edges of cities where land is quite cheap. The areas represent the bulk of American housing, according to data contained in the *AHS* — although they do seem to be somewhat underrepresented in the *AHS*.

Finally, there is a third category of cities and suburbs where the price of homes is much higher than the cost of new construction. Manhattan and Palo Alto are two of those places. Indeed, many such places are in California, but the 1990s saw an increase in the number of those areas in the Northeast and South. While there are a number of areas with extremely

TABLE 1

Housing Across the Nation

House price distribution, 1989 and 1999

	1989		1999	
	Units valued less than 90% of construction costs	Units valued greater than 140% of construction costs	Units valued less than 90% of construction costs	Units valued greater than 140% of construction costs
Nation	17%	46%	17%	50%
Northeast	12%	58%	37%	34%
South	11%	50%	13%	46%
Midwest	41%	14%	30%	27%
West	5%	69%	4%	77%

Source: Authors' calculations, derived from central city data contained in the *American Housing Survey* and construction costs from the R.S. Means Company.

TABLE 2

Housing in the Cities

House price distribution for major U.S. cities, 1989 and 1999

City	1989 Units valued less than 90% of construction costs	1989 Units valued greater than 140% of construction costs	1999 Units valued less than 90% of construction costs	1999 Units valued greater than 140% of construction costs
Albuquerque, N.M.	2%	82%	3%	83%
Anaheim, Calif.	0%	100%	0%	93%
Austin, Tex.	0%	46%	6%	71%
Baltimore, Md.	18%	41%	30%	27%
Chicago, Ill.	20%	28%	16%	44%
Columbus, Ohio	33%	18%	12%	29%
Dallas, Tex.	6%	56%	13%	47%
Denver, Colo.	4%	60%	8%	86%
Detroit, Mich.	85%	5%	54%	20%
El Paso, Tex.	5%	34%	2%	28%
Fort Worth, Tex.	12%	40%	26%	29%
Greensboro, N.C.	13%	59%	0%	69%
Houston, Tex.	25%	40%	25%	27%
Indianapolis, Ind.	25%	22%	24%	22%
Jacksonville, Fla.	8%	55%	11%	43%
Kansas City, Mo.	33%	9%	40%	12%
Las Vegas, Nev.	0%	29%	3%	45%
Little Rock, Ark.	9%	36%	8%	40%
Los Angeles, Calif.	2%	93%	4%	89%
Milwaukee, Wis.	32%	10%	27%	22%
Minneapolis, Minn.	22%	21%	20%	30%
Nashville-Davidson, Tenn.	2%	69%	5%	56%
New Orleans, La.	2%	49%	3%	57%
New York, N.Y.	4%	81%	11%	56%
Norfolk, Va.	1%	87%	2%	66%
Oklahoma City, Okla.	13%	30%	16%	41%
Omaha, Neb.	21%	15%	30%	21%
Philadelphia, Pa.	10%	52%	60%	16%
Phoenix, Ariz.	2%	69%	5%	65%
Raleigh, N.C.	6%	81%	2%	81%
Sacramento, Calif.	0%	55%	3%	72%
San Antonio, Tex.	12%	48%	30%	26%
San Diego, Calif.	7%	88%	3%	93%
San Francisco, Calif.	0%	97%	4%	96%
Seattle, Wash.	6%	49%	2%	86%
Tampa, Fla.	9%	43%	13%	49%
Toledo, Ohio	27%	16%	40%	23%
Tucson, Ariz.	6%	43%	4%	61%
Tulsa, Okla.	7%	36%	8%	38%
Wichita, Kans.	18%	21%	13%	48%

Source: Authors' calculations, derived from central city data contained in the *American Housing Survey* and construction costs from the R.S. Means Company.

expensive homes, they do not represent the norm for America. However, both poor and non-poor people suffer from higher housing costs in such areas.

ZONING AND THE DEMAND FOR LAND

Why are home prices in those areas so high? The traditional answer is that land in those areas is intrinsically expensive. According to that view, there is a great deal of demand and land, by its very nature, is limited in supply. As such, the price of housing must rise.

There is another alternative, namely that homes are expensive in high-cost areas primarily because of government regulation in the form of zoning and other restrictions on building. According to this view, housing is expensive because of artificial limits on construction created by the regulation of new housing.

There is no doubt that property values are relatively high in the coastal parts of the country, at least partially because of strong demand to live in those high-amenity areas. However, our examination of the data suggests that there is plenty of land in high-cost areas, and new construction might be able to push the cost of houses down to near the cost of construction. However, the barriers to building create a potentially massive wedge between housing prices and building costs.

The gap between total housing costs and the price of structure is a combination of land costs and what we call the "zoning tax." The zoning tax is meant to include all of the impact of government regulation on the cost of construction housing. In principle, the gap between structure costs and total housing costs measures the combination of the zoning tax and the land costs. However, we can use several measures to determine the significance of the zoning tax.

Land-value testing If the driving force for the wedge between construction costs and housing costs is intense demand for land in high-cost areas, then houses with bigger lots should be much more expensive than similar houses on smaller lots. If you double the lot size, you should double the gap between the structure cost and the housing price. But, if zoning also is driving the wedge, then the gap should be wider (and more constant for homes on various-size lots). That is, the lot's ability to accommodate a house in accordance with land-use regulations produces the lot's value. That implication is the best test of the importance of the zoning tax.

Empirically, we can test that implication by

looking at two different ways of valuing land. First, we would compare the price of comparable homes situated on lots of different sizes to see if the prices of the larger lots are proportional to the smaller lots. That hedonic methodology can be thought of as giving the "intensive value" of land — that is, how much land is worth on the margin to homeowners. Once we have determined that value, we would then determine the "extensive" value for the land by subtracting the construction cost from the home value and dividing by the number of acres. That would give us another per-acre value of land that is implied in the home price. The second methodology shows us how much it is worth to have a plot of land with a house on it.

In a free market, land should be valued the same using either methodology. After all, if a homeowner does not value his land very much, he would subdivide and sell it to someone else. But under regulation, the differences between the two values can be quite large because the homeowner is not allowed to subdivide.

The test To determine the intensive value, we estimated both linear and logarithmic regressions of housing prices as a function of lot size and a number of control factors, including the number of bedrooms; the number of bathrooms; the number of other rooms; the inclusion of such features as a fireplace, garage, basement, or air conditioner; whether the home was located in a central city; and the home's age. Using data from the 1999 *AHS*, we estimated regressions separately for 26 metropolitan areas, each of which had at least 100 observations, so that our estimate of the value of land would be reasonably precise. Our results are shown in the first two columns of Table 4

In general, the estimates suggest that land is relatively cheap. In places where the point estimate is reasonably precise, land prices tend to be between $1 and $2 per square foot. In those areas, that implies that an average homeowner would be willing to pay between $11,000 and $22,000 for an extra quarter-acre of land. The estimates are higher in some cities, primarily in California. For example, in San Francisco it appears that homeowners are willing to pay almost $80,000 for an extra quarter-acre of land.

We determined the extensive values by computing the difference between home prices and structure costs. Subtracting structure costs from reported home values and then dividing by the amount of land generated an estimate of the value of land including the implicit tax on new construction. The average values for each metro-

TABLE 3

Housing in the Suburbs

House price distribution for major U.S. suburban areas, 1989 and 1999

	1989		1999	
City	Units valued less than 90% of construction costs	Units valued greater than 140% of construction costs	Units valued less than 90% of construction costs	Units valued greater than 140% of construction costs
Albany, N.Y.	6%	63%	0%	40%
Anaheim, Calif.	25%	96%	3%	96%
Atlanta, Ga.	3%	67%	6%	58%
Baltimore, Md.	5%	66%	1%	61%
Birmingham, Ala.	10%	56%	12%	53%
Boston, Mass.	1%	87%	2%	86%
Chicago, Ill.	6%	67%	5%	74%
Cincinnati, Ohio	10%	29%	10%	47%
Cleveland, Ohio	15%	23%	5%	58%
Columbus, Ohio	12%	47%	3%	61%
Dallas, Tex.	3%	58%	6%	52%
Detroit, Mich.	24%	26%	8%	58%
Fort Lauderdale, Fla.	0%	76%	0%	85%
Fort Worth, Tex.	9%	59%	9%	49%
Houston, Tex.	23%	24%	8%	31%
Kansas City, Mo.	15%	22%	5%	33%
Los Angeles, Calif.	4%	91%	4%	89%
Miami, Fla.	5%	72%	0%	73%
Milwaukee, Wis.	5%	39%	8%	53%
Minneapolis, Minn.	8%	29%	5%	43%
New Orleans, La.	10%	53%	6%	61%
New York, N.Y.	3%	85%	9%	78%
Newark, N.J.	1%	96%	1%	72%
Orlando, Fla.	3%	70%	4%	61%
Oxnard, Calif.	0%	100%	4%	93%
Philadelphia, Pa.	3%	78%	11%	47%
Phoenix, Ariz.	2%	65%	0%	76%
Pittsburgh, Pa.	23%	19%	25%	21%
Riverside, Calif.	5%	87%	2%	76%
Rochester, N.Y.	1%	63%	9%	28%
Sacramento, Calif.	3%	83%	5%	72%
Salt Lake City, Utah	10%	22%	2%	86%
San Diego, Calif.	4%	92%	5%	88%
San Francisco, Calif.	1%	98%	2%	97%
Seattle, Wash.	2%	72%	1%	90%
St. Louis, Mo.	11%	34%	21%	34%
Tampa, Fla.	3%	57%	5%	66%

Source: Authors' calculations, derived from central city data contained in the *American Housing Survey* and construction costs from the R.S. Means Company.

TABLE 4

At What Price, Zoning?

Land price on the extensive and intensive margins

City	Hedonic price of land/ft linear specification	Hedonic price of land/ft log-log specification	Imputed land cost from Means data (extensive margin)	Mean house price
Anaheim, Calif.	$2.89 (1.54)	$3.55 (1.34)	$38.99	$312,312
Atlanta, Ga.	$0.23 (0.50)	-$0.30 (-0.70)	$3.20	$150,027
Baltimore, Md.	$1.15 (2.53)	$5.21 (2.31)	$4.43	$152,813
Boston, Mass.	$0.07 (0.10)	$0.55 (0.67)	$13.16	$250,897
Chicago, Ill.	$0.79 (2.43)	$0.80 (1.96)	$14.57	$184,249
Cincinnati, Ohio	$0.89 (1.92)	$0.50 (1.14)	$2.71	$114,083
Cleveland, Ohio	$0.26 (0.95)	$0.24 (0.81)	$4.13	$128,127
Dallas, Tex.	-$0.83 (-1.14)	$0.21 (0.27)	$5.42	$117,805
Detroit, Mich.	$0.14 (0.92)	$0.45 (2.31)	$5.10	$138,217
Houston, Tex.	$1.43 (2.61)	$1.62 (2.66)	$4.37	$108,463
Kansas City, Mo.	$2.06 (2.75)	$1.65 (2.11)	$1.92	$112,700
Los Angeles, Calif.	$2.19 (4.63)	$2.60 (3.53)	$30.44	$254,221
Miami, Fla.	$0.37 (0.45)	$0.18 (0.24)	$10.87	$153,041
Milwaukee, Wis.	$1.44 (3.08)	$0.95 (1.90)	$3.04	$130,451
Minneapolis, Minn.	$0.29 (0.93)	$0.35 (1.09)	$8.81	$149,267
New York, N.Y.	$0.84 (1.09)	$1.62 (1.60)	$32.33	$252,743
Newark, Del.	$0.42 (0.62)	$0.10 (0.11)	$17.70	$231,312
Philadelphia, Pa.	$1.07 (6.41)	$0.77 (5.28)	$3.20	$163,615
Phoenix, Ariz.	$1.89 (3.88)	$1.86 (3.26)	$6.86	$143,296
Pittsburgh, Pa.	$2.28 (6.26)	$1.71 (4.55)	$3.08	$106,747
Riverside, Calif.	$1.35 (3.55)	$1.60 (2.95)	$7.92	$149,819
San Diego, Calif.	$0.58 (0.97)	$1.29 (1.33)	$26.12	$245,764
San Francisco, Calif.	$0.97 (0.76)(	$7.84 2.42)	$63.72	$461,209
Seattle, Wash.	-$0.68 (-0.69)	$0.48 (0.06)	$18.91	$262,676
St. Louis, Mo.	$0.63 (1.91)	$0.07 (1.55)	$1.74	$110,335
Tampa, Fla.	$0.19 (0.36)	$0.89 (1.30)	$6.32	$101,593

T-statistics in parentheses

politan area are in the third column of Table 4.

Comparing the first two columns with the third column illustrates the vast differences in our estimates of the intensive and extensive prices of land. In many cases, our extensive estimates are about 10 times larger than the intensive prices. For example, in Chicago our imputed price of land per square foot from the extensive margin methodology is $14.57. That means that a home on a quarter-acre plot in Chicago costs over $140,000 more than construction costs. In San Diego, a quarter-acre plot is implicitly priced at nearly $285,000. The analogous figure is even higher in New York City at just over $350,000. And in San Francisco, the plot apparently is worth just under $700,000.

Empirically, we found that the hedonic estimates produce land values that often are about one-tenth of the values calculated with the extensive methodology. We believe that the dramatic difference between the two sets of estimates is our best evidence for the critical role that zoning plays in creating high housing costs. The findings suggest that, for an average lot, only 10 percent of the value of the land comes from an intrinsically high land price as measured by hedonic prices.

Lot-size testing If the price of land, and not the zoning tax, is driving the high housing costs in "extreme" areas, then people should consume less land and houses would be built on small lots (holding incomes constant). However, prices inflated from a high zoning tax would not push people onto small lots; instead, the land-use restrictions would force homebuyers to purchase larger yards than they may otherwise desire. As such, if the zoning tax is driving high housing prices, we should not expect to see much of a correlation between land costs and lot sizes.

We can test that implication empirically by looking at crowding in high-cost areas. If high-cost areas have high population densities, then we have reason to believe that demand for land is what is driving the high housing prices. If, however, the high-price areas do not have abnormally high population densities, then we have reason to believe that regulation is driving the high prices.

The test To test that implication, we correlated land density within a central city with our various measures of housing prices within the city. We used as our land area measure the logarithm of the city's land area divided by the number of households. (Use of population per

square mile yields similar results.) Obviously, density is higher the lower the value of this variable.

Table 5 shows the results from a series of regressions exploring the relationship of our density measure with the index of expensive homes and land in our sample of cities. In the first regression, we use our measure of the share of houses that cost at least 40 percent more than construction costs as the independent variable. In that case, the relationship is negative so that a higher concentration of expensive homes is associated with greater density. However, the coefficient is not much larger than its standard error, so the relationship is not statistically significant. The standard error was large because of the extraordinary amount of heterogeneity in the relationship between density and the distribution of house prices. For example, Detroit, Seattle, and Los Angeles have similar land densities per household, but radically different fractions of units sitting on expensive land. Analogously, New York City and San Diego have similarly high fractions of expensive land but very different residential densities.

In the second regression, we controlled for median income in each city in 1990 to allow for the possibility that richer people live in expensive areas and demand more land. However, there still is no strong relationship between density and the fraction of expensive land and homes. Density is slightly higher in more expensive areas on average, but the relationship is tenuous even when controlling for income.

In the third regression, the median house price in 1990 was used as the independent variable. There is a statistically significant negative relationship between density and price in that case, with the elasticity being -0.56. However, the large heterogeneity described in the first regression is also found there.

For the fourth, fifth, and sixth regressions, we took the zoning-tax model more seriously and used an amenity to look at the impact of housing costs and land consumption. We focused on a particularly well-studied amenity — average January temperature. In the fourth regression, we see that there is a strong positive relationship between the fraction of expensive homes and land, and average January temperature. That relationship is necessary for the variable to qualify as an amenity. In the fifth regression, we regressed the logarithm of land area per household on January temperature. In that case, the relationship is much less strong; the t-statistic is 1.6. Taken together, the results show that warmer January temperature may raise housing prices, but there is no strong evidence that it increases densities — at least, not by very much. Indirectly, that suggests that the warmer temperatures are not raising the marginal cost of land by much.

For the sixth regression, we regressed the logarithm of land area per household on the distribution of housing prices using average January temperature as an instrument. January temperature is meant to represent the exogenous variation in amenities that causes prices to rise. Not only is there no statistically meaningful connection between prices and land consumption, but the instrumental variables results also imply that higher prices are associated with lower, not higher, densities. One possibility is that incomes are higher in the areas and that richer people are demanding more land. Consequently, we redid the analysis adding median family income as a control, but the results were largely unchanged. That is, there is no statistically significant relation between instrumented prices and density, and the point estimate still is slightly positive (albeit small). While we acknowledge that the sample is small and there could be other omitted factors, the results suggest to us that higher prices have more to do with zoning than a higher marginal cost of land.

As a final test, we regressed our two measures of land costs from Table 4 with average January temperature. We only have 26 observations, but the results are still quite illuminating. A standard deviation increase of 14.7 degrees in mean January temperature is associated with a $5.02 higher construction cost-based price of land. The same increase in warmth is associated with only a 47¢ higher hedonic-based price of land. Once again, amenities seem to have more of an effect on the implicit zoning tax than on the marginal cost of land.

TABLE 5

Demand for Land

Density and the distribution of house prices in U.S. cities, 1990

	Dep. var: log land area per HH	Dep. var: log land area per HH	Dep. var: log land area per HH	Dep. var: % units valued at ≥140% of CC	Dep. var: log land area per HH	(2SLS: Jan. temp. as instrument) Dep. var: log land area per HH
% Units valued at ≥140% of CC	-0.51 (0.451)	-0.57 (0.507)				1.177 (0.880)
Log median family income, 1989		0.266 (0.895)				
Median house price, 1990			-0.565 (0.225)			
Mean January temperature				0.013 (0.003)	0.015 (0.009)	
Intercept	-7.050 (0.245)	-9.784 (9.191)	-0.959 (2.536)	-0.021 (0.113)	-7.882 (0.387)	-17.254 (8.678)
$\bar{R}^2$	0.01	-0.02	0.12	0.34	0.04	
Number of obs.	40	40	40	40	40	40

Notes: HH = household; CC = construction costs. Standard errors in parentheses. Density is defined as the log of the ratio of square miles of land in the city divided by the number of households. See the text for the details.

Regulation and prices The third implication of the zoning tax view suggests that the amount of zoning should be correlated with land prices, but not lot size. As such, our third approach is to correlate measures of regulation with the value of housing prices. That approach is somewhat problematic because high values of land may themselves create regulation. Nonetheless, we find a robust connection between high prices and regulation. Almost all of the very high cost areas are extremely regulated even though they have fairly reasonable density levels. Again, we interpret that as evidence for the importance of regulation.

The test As a measure of zoning, we used data from the *Wharton Land Use Control Survey*, which is a 1989 collection of information on land-use restrictions from jurisdictions in 60 metropolitan areas. We specifically looked at the zoning information for the 45 metropolitan areas covered in the *AHS*.

The variable we focus on here is a survey measure of the average length of time between an application for rezoning and the issuance of a building permit for a modest-size, single-family subdivision of less than 50 units. The measure can take on values ranging from one to five with a value of one indicating the permit issuance lag is less than three months, a value of two indicating the time frame is between three and six months, a value of three indicating a lag of seven months to a year, a value of four meaning the lag is between one and two years, and a five signaling a very long lag of over two years.

The correlation of the permit length variable with the fraction of housing stock priced more than 40 percent above the cost of new construction is fairly high at 0.43. The mean fraction of high-cost housing among the cities with permit waiting times of at least six months is 0.75. Difficult zoning seems to be ubiquitous in high cost areas.

Table 6 reports some regression results using that variable.

TABLE 6

The Effects of Zoning

Zoning regulations and the distribution of house prices

	Dep. variable: % units valued at ≥ 140% of CC	Dep. variable: % units valued at ≥ 140% of CC	Dep. variable: implied zoning tax
Time to permit issuance for rezoning request	0.150 (0.051)	0.112 (0.044)	6.796 (3.048)
Log median family income, 1989		0.260 (0.255)	
% Pop. growth, 1980-1990		1.080 (0.411)	
Intercept	0.111 (0.120)	-2.512 (2.634)	-3.527 (7.732)
$\bar{R}^2$	0.16	0.40	0.15
N	40	40	22

Notes: CC = construction costs. The independent zoning variable is a categorical measure of time lag between application for rezoning and issuance of building permit for development of a modest-sized single-family subdivision. See the text for details.

In the first column, we regressed our housing cost measure (again using the share of the city's housing stock priced more than 40 percent above the cost of new construction) on the time required to get a permit issued for a rezoning request. We see a strong positive relationship so that when the index increases by one, 15 percent more of the housing stock becomes quite expensive. That positive relationship also survives controlling for population growth during the 1980s and median income, as shown in the second column.

In the final column of Table 6, we returned to our implied zoning tax calculated using the data in Table 4. Specifically, we subtracted the cost of land estimated in the non-linear hedonic equation (i.e., the second column of Table 4) from the cost of land implied by subtracting structure cost from total home value (i.e., the third column of Table 4). We then regressed that variable on our zoning measure. As the results show, the implied zoning tax is strongly increasing in the length of time it takes to get a permit issued for a subdivision. Increasing a single category in terms of permit issuance lag is associated with an increase of nearly $7 per square foot in the implicit zoning tax. If the dependent variable is logged, the results imply that a one-unit increase in the index is associated with a 0.50-log point increase in the implicit zoning tax.

CONCLUSION

America is not facing a nationwide affordable-housing crisis. In most areas of the country, home prices appear to be fairly close to the physical costs of construction. In some areas of the country, home prices are even far below the physical costs of construction. Only in particular areas, especially New York City and California, do housing prices diverge substantially from the costs of new construction.

Those areas where houses are expensive are not generally characterized by substantially higher marginal costs of land as estimated by a hedonic model. The hedonic results imply that the cost of a house on 10,000 square feet usually is pretty close in value to a house on 15,000 square feet. In addition, the high prices often are not associated with extremely high densities. For example, there is as much land per household in San Diego (a high price area) as there is in Cleveland (a low price area).

The bulk of the evidence that we have marshaled suggests that zoning and other land-use controls are more responsible for high prices where we see them. There is a huge gap between the price of land implied by the difference between home prices and construction costs and the price of land implied by the price differences between homes on 10,000 square feet and homes on 15,000 square feet. Measures of zoning strictness are highly correlated with high prices. While all of our evidence is suggestive, not definitive, it seems to suggest that land-use regulation is responsible for high housing costs where they exist.

If policy advocates are interested in reducing housing costs, they would do well to start with zoning reform. Building small numbers of subsidized housing units is likely to have a trivial impact on average housing prices (given any reasonable demand elasticity), even if well-targeted toward deserving poor households. However, reducing the implied zoning tax on new construction could well have a massive impact on housing prices. R